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Teacher Strategies for Developing Fourth-Grade Students' Critical Thinking Skills at SD Negeri 154511 Suga Suga

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Abstract

Critical thinking is an essential skill that enables elementary students to ask questions, analyze information, evaluate arguments, solve problems, and make reasoned decisions. However, critical thinking does not develop automatically; it requires deliberate instructional strategies, active learning opportunities, and teacher scaffolding. This study aims to describe teacher strategies for developing fourth-grade students' critical thinking skills at SD Negeri 154511 Suga Suga in the 2023/2024 academic year. This study employed a descriptive qualitative design. Data were collected through classroom observation and semi-structured interviews with two teachers and two students. The data were analyzed through data reduction, data display, thematic interpretation, and conclusion drawing. The findings show that students' critical thinking skills were still developing and were limited by several classroom conditions, including teacher-centered instruction, textbook-based explanation, limited student questioning, low confidence, and unequal student participation. Teachers attempted to support critical thinking through group discussion, open-ended questions, problem-solving tasks, project activities, quizzes, practical activities, feedback, and differentiated guidance. However, these strategies were not yet implemented consistently. The study concludes that teacher strategies for developing critical thinking need to be strengthened through more systematic questioning, student-centered learning, differentiated instruction, reflective discussion, and continuous feedback. The findings imply that elementary teachers should intentionally design learning activities that train students to ask, reason, explain, evaluate, and communicate ideas.

Keywords: Teacher Strategy; Critical Thinking; Elementary School; Student-Centered Learning; Qualitative Study

Introduction

Critical thinking has become one of the most important competencies in elementary education because students need to learn how to ask questions, analyze information, evaluate evidence, solve problems, and make responsible decisions. In the context of twenty-first-century learning, students are not expected to only receive information from teachers and textbooks. They are also expected to process information actively, compare ideas, communicate arguments, and reflect on their understanding. Therefore, critical thinking should be introduced and developed from the elementary school level.

Critical thinking can be understood as reasonable and reflective thinking that helps learners decide what to believe or what action to take. Ennis (2015) emphasizes that critical thinking involves both dispositions and abilities, including clarification, inference, evaluation, and decision-making. In classroom practice, critical thinking can be observed when students ask meaningful questions, explain reasons, compare different answers, identify problems,

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evaluate information, and defend their opinions respectfully. Thus, critical thinking is not merely a cognitive ability, but also a learning habit that must be practiced regularly.

Elementary students need direct guidance to develop critical thinking because they are still learning how to organize ideas, interpret information, and communicate reasoning. Without appropriate instructional support, students may become passive, wait for direct answers from the teacher, or memorize information without deeper understanding. Masithoh et al. (2025) found that elementary students showed relatively good ability in formulating questions but still had difficulty in evaluating decisions. Their study also showed that teacher-dominated classroom interaction limited students' opportunities for reflective thinking. This finding indicates that the teacher's instructional strategy strongly affects the development of students' critical thinking.

The teacher plays a central role in creating classroom conditions that support critical thinking. Teachers can encourage students to think critically by asking open-ended questions, giving problem-based tasks, facilitating group discussion, connecting learning materials with real-life situations, and providing constructive feedback. Hakim et al. (2021) found that teachers' strategies for improving critical thinking included asking open-ended questions, clarifying meaning, and using small-group discussions with specific tasks. These strategies are relevant for elementary learning because they help students move from passive listening toward active reasoning.

Several learning models have also been shown to support critical thinking among elementary students. Darmawati and Mustadi (2023) found that problem-based learning significantly influenced elementary students' critical thinking skills compared with expository learning. Sa'diyah et al. (2024), through a meta-analysis, also found that problem-based learning had a strong effect on the development of critical thinking among elementary school students in Indonesia. These studies show that critical thinking can be improved when students are placed in learning situations that require them to analyze problems, discuss alternatives, and explain solutions.

Project-based learning is another strategy that can support critical thinking. Rona et al. (2025) found that project-based learning had a moderate effect on elementary students' critical thinking in science learning. Gunawan et al. (2025) also emphasized that problem-based and project-oriented learning can become alternatives for improving critical thinking in elementary Indonesian language learning. These studies support the idea that critical thinking develops more effectively when students are given meaningful tasks that require investigation, discussion, creativity, and reflection.

However, preliminary observation at SD Negeri 154511 Suga Suga showed that fourth-grade students still had limited opportunities to practice critical thinking. Some students were less active in asking questions, lacked confidence in expressing ideas, and tended to wait for teacher explanation. Classroom learning was sometimes still monotonous and textbook-centered. Some students also felt bored during lessons because they were not sufficiently involved in discussion, problem solving, or exploratory activities. This condition indicates that teacher strategies need to be examined more deeply to understand how critical thinking is currently supported and what improvements are needed.

Based on this background, this study aims to describe teacher strategies for developing fourth-grade students' critical thinking skills at SD Negeri 154511 Suga. The study focuses on teachers' efforts to involve students in learning, encourage questioning, guide problem solving, provide feedback, and adjust instruction to students' different abilities. The novelty of this study lies in its qualitative focus on teacher and student perspectives in a real elementary

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classroom context, especially in identifying the gap between intended critical-thinking strategies and actual classroom implementation.

Research Method

This study employed a descriptive qualitative research design. This design was selected because the study aimed to describe teacher strategies, classroom practices, student responses, and obstacles in developing critical thinking skills. A qualitative approach was considered appropriate because the research focused on natural classroom conditions, teacher-student interaction, and participants' experiences rather than statistical measurement.

The study was conducted at SD Negeri 154511 Suga Suga in the 2023/2024 academic year. The research focused on Grade IV learning because the class had been identified as needing support in developing active participation and critical thinking. The Grade IV class consisted of 28 students. The interview participants consisted of two teachers and two students who were selected purposively because they were directly involved in the observed learning process.

Data were collected through observation and semi-structured interviews. Classroom observation was conducted for two days to examine teaching strategies, student participation, questioning activities, discussion patterns, and students' confidence in expressing ideas. Interviews with teachers were conducted to explore their strategies for developing critical thinking, their understanding of students' difficulties, and the obstacles they faced in classroom implementation. Interviews with students were conducted to understand their experiences during learning, their perception of teacher strategies, and the difficulties they faced in participating actively. The research participants and data sources are presented in Table 1.

Table 1. Research Participants and Data Sources

Data Source	Number	Focus of Data
Grade IV students	28 students	Classroom context and observed learning behavior
Teacher informants	2 teachers	Teacher strategies, learning obstacles, and instructional reflection
Student informants	2 students	Student perception of learning strategies and classroom participation
Observation	2 days	Teaching practice, questioning, discussion, interaction, and student activity

The data collection focus is presented in Table 2.

Table 2. Data Collection Focus

Technique	Focus	Purpose
Observation	Teacher-centered or student-centered learning, student participation, questioning, discussion, and problem-solving activities	To identify actual classroom practices related to critical thinking
Teacher interview	Strategies used by teachers, obstacles in developing critical thinking, and student difficulties	To understand teacher perspectives and instructional decisions

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Technique	Focus	Purpose
Student interview	Student confidence, interest, understanding, and experience of teacher strategies	To understand how students experienced classroom learning
Documentation	Field notes and classroom observation records	To support interpretation of observation and interview data

The data were analyzed using an interactive qualitative analysis process consisting of data reduction, data display, conclusion drawing, and verification. In the data reduction stage, the researcher selected relevant statements and observation notes related to teacher strategies, student responses, obstacles, and critical thinking indicators. In the data display stage, the data were organized into thematic categories. In the conclusion drawing stage, the themes were interpreted and connected to the research objectives and relevant literature. To strengthen trustworthiness, the researcher compared observation results with teacher and student interview data.

Research Design

This study employed a descriptive qualitative research design. The design was selected because the purpose of the study was to describe teacher strategies, classroom practices, student responses, and obstacles in developing students' critical thinking skills. A qualitative approach was considered appropriate as the study focused on understanding natural classroom conditions, teacher student interactions, and participants' experiences rather than measuring variables statistically.

Participants, Population, Sample, or Data Sources

The study was conducted at SD Negeri 154511 Suga Suga during the 2023/2024 academic year. The population consisted of all Grade IV students. The participants included 28 Grade IV students who served as the classroom observation subjects. In addition, two teachers and two students were selected purposively as interview informants because they were directly involved in the teaching and learning process. Data sources included classroom observations, teacher interviews, student interviews, and supporting documentation such as field notes and observation records.

Instruments and Data Collection Techniques

Data were collected through observation, semi-structured interviews, and documentation. Observation sheets were used to record teaching strategies, student participation, questioning activities, discussion patterns, and problem-solving behaviors during classroom learning. Semi-structured interview guides were used to gather information from teachers regarding instructional strategies, challenges, and students' learning difficulties, as well as from students regarding their learning experiences, participation, and perceptions of teacher strategies. Documentation in the form of field notes and classroom records was used to support and verify the collected data.

Research Procedure

The research was conducted in several stages. First, the researcher obtained permission from the school and identified the research participants. Second, classroom observations were conducted for two days to examine teaching practices, student engagement, questioning activities, and classroom interactions. Third, semi-structured interviews were conducted with two teachers and two students to gain deeper insights into teacher strategies, student responses, and learning challenges. Finally, all collected data were organized, analyzed, and interpreted to identify themes related to the development of students' critical thinking skills.

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Data Analysis Technique

The data were analyzed using an interactive qualitative analysis model consisting of data reduction, data display, conclusion drawing, and verification. During data reduction, the researcher selected and organized relevant information related to teacher strategies, student responses, classroom obstacles, and critical thinking indicators. The data were then displayed in thematic categories to facilitate interpretation. Conclusions were drawn by identifying patterns and relationships among the findings and connecting them with the research objectives and relevant literature. Verification was conducted throughout the analysis process to ensure the consistency and accuracy of interpretations.

Validity, Reliability, or Trustworthiness

To ensure the trustworthiness of the findings, data triangulation was applied by comparing information obtained from classroom observations, teacher interviews, student interviews, and documentation. The researcher also conducted cross-checking of findings across different data sources to confirm consistency and credibility. This triangulation process helped strengthen the validity and trustworthiness of the research findings.

Ethical Considerations

This study was conducted in accordance with ethical research principles. Permission to conduct the research was obtained from the school administration. Participation in interviews was voluntary, and all participants were informed about the purpose of the study. Confidentiality and anonymity of participants were maintained throughout the research process. The collected data were used solely for academic purposes and reported without revealing participants' identities.

Results

This section presents the main findings of the study based on classroom observation and interview data at SD Negeri 154511 Suga Suga. The findings are organized according to emerging themes related to teacher strategies and students' critical thinking development.The results show that teacher strategies for developing students' critical thinking were present but not yet implemented consistently. Teachers applied various instructional strategies, including questioning, group discussion, problem-solving tasks, project-based learning, practical activities, quizzes, feedback, and differentiated instruction. However, classroom observation indicated that teacher centered instruction, characterized by explanation and textbook use, was still dominant in several lessons.

Students' critical thinking skills were found to be limited. Many students were passive during learning activities, rarely asked questions, and were hesitant to express opinions. Interview data revealed that students tended to wait for teacher explanations and experienced fear of making mistakes, which reduced their classroom participation. Questioning strategies were implemented by teachers to stimulate students' thinking; however, most questions remained at the recall level and did not consistently encourage reasoning or evaluation. Similarly, group discussion and project-based activities were applied, but student participation was uneven, with only some students actively involved in the learning process.

Differentiated instruction was applied in a limited manner, where teachers provided additional assistance to students who experienced difficulties. However, this approach was not systematically planned. Feedback was also provided mainly after task completion, while formative feedback during the learning process was still limited. The thematic findings of teacher strategies and students' responses are summarized in Table 1.

Table 3. Thematic Findings of Teacher Strategies and Students' Responses

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Theme	Finding	Interpretation
Student confidence	Students were reluctant to ask questions and express opinions	Low participation due to fear of mistakes
Teacher-centered learning	Learning was dominated by teacher explanation and textbooks	Limited student engagement and thinking activity
Questioning strategy	Mostly recall-based questions	Weak stimulation of critical thinking
Group discussion	Used for collaborative learning	Uneven student participation
Project/practical activities	Implemented but inconsistent	Increased engagement but not optimal
Differentiated instruction	Applied in limited form	Not systematically implemented
Feedback	Given after completion of tasks	Lack of formative feedback during learning

Overall, the results of this study demonstrate that although various instructional strategies have been implemented by teachers to support students' critical thinking development, their application is not yet consistent or fully optimal, resulting in limited student engagement and the need for more structured, student-centered learning practices in the classroom.

Discussion

The findings of this study indicate that teacher strategies play an important role in supporting students' critical thinking development, although their implementation is not yet optimal. Critical thinking, as defined by Ennis (2015), involves clarification, inference, evaluation, and decision-making. However, these aspects are not yet fully reflected in students' classroom behavior due to low participation and limited confidence. Students tend to be passive and afraid of making mistakes, which reduces their willingness to engage in reasoning activities. This condition is closely related to classroom climate, where students often depend on teacher explanations and struggle to evaluate ideas independently, as also reported by Masithoh et al. (2025). Therefore, critical thinking development requires not only cognitive stimulation but also a supportive learning environment that encourages active participation.

The dominance of teacher centered learning further contributes to the limited development of students' critical thinking skills. When instruction is mainly based on explanation and textbook use, students have fewer opportunities to construct knowledge actively. Although teachers have applied various strategies such as questioning, group discussion, problem-solving tasks, and project-based learning, these strategies are not consistently implemented. Questioning practices, for example, are still dominated by recall-level questions, which limits students' opportunities to analyze, justify, and evaluate ideas. This indicates that instructional practices still need to shift toward more student centered approaches that promote active thinking and engagement.

Group discussion and project-based learning show potential in supporting students' critical thinking, but their effectiveness is reduced by uneven participation and lack of structured implementation. Some students actively contribute during collaborative activities, while others remain passive, indicating the need for clearer roles and stronger facilitation from the teacher. In addition, differentiated instruction and feedback are also applied in limited and non-systematic ways. Feedback is mostly given after task completion rather than during the

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learning process, which limits its role in guiding students' thinking and helping them revise their understanding in real time.

Overall, the findings show that developing students' critical thinking requires more than the presence of various teaching strategies; it requires consistent implementation and structured instructional design. Teachers need to ensure that students are actively engaged through higher-order questioning, structured collaboration, problem-based learning, project-based learning, differentiated support, and formative feedback. This study highlights the gap between intended instructional strategies and actual classroom practice, indicating that although teachers are aware of approaches to foster critical thinking, their consistent application remains a challenge in elementary education. The study is limited by its small scope and short observation period, so future research is recommended to involve more participants, longer observation, and additional instruments such as critical thinking assessments to obtain more comprehensive results.

Conclusion

This study concludes that teacher strategies at SD Negeri 154511 Suga Suga have an important role in supporting the development of students' critical thinking skills, but their implementation is not yet optimal and consistent. Although various strategies such as questioning, group discussion, problem-based tasks, project-based learning, differentiated instruction, and feedback have been applied, they are not yet fully integrated into classroom practice, resulting in limited student critical thinking, particularly in asking questions, expressing opinions, and evaluating ideas. The findings also show that students' low confidence, fear of making mistakes, and the dominance of teacher-centered learning reduce opportunities for active engagement and higher-order thinking. Therefore, improving students' critical thinking requires more consistent, structured, and student-centered instructional practices that emphasize active participation, reasoning, collaboration, and formative feedback in elementary classroom learning.

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Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article. The research was conducted objectively without any financial, personal, or institutional influence that could affect the results or interpretation of the study.

Author Contributions

J.H. contributed to conceptualization, data collection, classroom observation, data analysis, and manuscript preparation. **A.M.** contributed to methodology development, research supervision, manuscript review, and final editing. **O.A.T.** contributed to literature review, data validation, thematic analysis, and manuscript revision. All authors have read, approved, and agreed to be accountable for the content and the final version of the manuscript.

Data Availability Statement

The data used in this study were obtained from classroom observations and interviews conducted at SD Negeri 154511 Suga Suga. Due to ethical considerations and to protect

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participant confidentiality, the raw data are not publicly available but can be requested from the corresponding author upon reasonable request.

Ethical Statement

This study was conducted in accordance with ethical research principles in education. Informed consent was obtained from all participants involved in the study, including teachers and students. Participation was voluntary, and confidentiality and anonymity were maintained throughout the research process. No harm or risk was posed to participants during data collection.

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